

MOULD DESIGN / PRODUCT DEVELOPMENT

Empakglass Training & Support Programs

We combine the power of technology with knowledge and experience, so our customers gain a competitive edge in the container Glass Industry.

Choosing the right strategic partners is the key success factor to any business therefore EMPAKGLASS is the right partner choice for you.

We support you on...

management@empakglass.com
www.empakglass.com



EMPAKGLASS[®]
PERFORMANCE SOLUTIONS

Empakglass Training & Support Programs

DETAILED TRAINING PROGRAM

MOULD DESIGN / PRODUCT DEVELOPMENT

MOULD DESIGN DIVISION HAS DEVELOPED A MOULD DESIGN/PRODUCT DEVELOPMENT TRAINING, COVERING:

1. Product development: understand the containers usage specification, and establish the correct design to improve/optimize line performance.
2. Production process definition, and Parison design rules.
3. Mould Equipment Interface: understand the machine limits, and choose the correct assembly.

THE TRAINING IS STRUCTURED IN 5 WORKING DAYS:

1. 3 days theoretical approach covering the 3 points mentioned above.
2. 2 days practical development using customer containers.

Note:

1) For new customers starting in the glass industry, some additional training days should be considered.

2) For the 1-2 days exercising, the customer will define 2-3 of its containers. These exercises will be used only for training purposes, and not as a mould design consultancy / support.



Performance Solutions

New markets / New Opportunities / Independency

We speak your language

Please contact us with your questions, even if you do not find the topic on this brochure, we will come back to you with an answer and proposal for solutions.

Inquires/orders can be made directly to:
management@empakglass.com

Standard quotes have been defined. Depending on the customer's needs, modified quotes will be issued.

The training can be provided either on customer site or on Empakglass premises.

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FUNCTIONS / GOALS OF A MOULD DESIGN DEPARTMENT

Listing the task of the mould design department.



CONTAINER REQUIREMENTS

What are the specifications required by a container? How to define them? (glass weight, capacity, mechanical resistance like internal pressure, vertical load...)
How can mould design influence these requirements?



PRODUCTION PROCESS SELECTION

CONTAINER FORMING BY THE BLOW & BLOW PROCESS

Explaining how a container is produced using the Blow & Blow process.



PRODUCTION PROCESS SELECTION

CONTAINER FORMING BY THE PRESS & BLOW PROCESS

Explaining how a container is produced using the Press & Blow process.



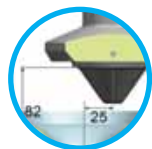
OVERVIEW OF I.S. MACHINES AND LIMITS

The mould design limits and ware ranges for each configuration.



MOULD EQUIPMENT PART

For each mould gears, explaining the feature of each design, and the importance & influence of these feature on the production.



MOULD DESIGN LIMITS AND RESTRICTIONS

Explaining why we define mould design restrictions for the design of the moulds - understand the influence of each parameter or mechanism on the mould design limits.

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INVERT DIMENSION AND MOULD HOLDER SELECTION

What is exactly the invert dimension? How to define the mould design parameters in order to design a good mould setup Interface.



BLOW & BLOW PARISON DESIGN RULES

How a parison has to be designed using the B&B process? Explaining all the rules and the various design parameters to develop an optimal parison, in order to get a good glass thickness distribution on the final container.



PRESS AND BLOW PARISON DESIGN RULES

How a parison has to be designed using the P&B process? Explaining all the rules and the various design parameters to develop an optimal parison, in order to get a good glass thickness distribution on the final container.



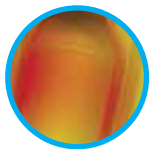
NARROW NECK PRESS AND BLOW PARISON DESIGN RULES

How a parison has to be designed using the NNP&B process? Explaining all the rules and the various design parameters to develop an optimal parison, in order to get a good glass thickness distribution on the final container.



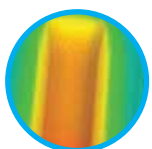
IDEAL GOB WEIGHT / BAFFLE DIAMETER SELECTION / AUXILIARY TABLES

Chart to be used while designing a parison (for B&B, P&B, NNP&B).



BLOW MOULD COOLING

This module presents all the rules to define an optimal blow mould cooling holes/slots pattern for the Radial and Axial cooling systems. It also explains tips & tricks to influence the mould T°C distribution horizontally and vertically.



BLANK MOULD COOLING

This module presents the principles of the blank side Radial and Axial cooling, and shows the influence of each cooling system on the blank mould T°C distribution. It also explains tips & tricks to influence the heat transfer from the glass to the blank mould, in order to get the most conditioned parison for a specific production process.